5.0 MITIGATION

This section discusses fuels mitigation and needs and associated costs for each Fire District. The environmental effects and public education programs are included under one section and apply to all Fire Districts within Fremont County.

Fuels Mitigation – Hazardous fuel buildup resulting in wildland fires represent the primary risk to homeowners, businesses, and state and federal facilities located outside of city limits. Fuel break locations are identified in this section based on recommendations provided by each fire chief, input from county commissioners and BLM, assessments of subdivisions and additions determined to be of importance and, review of other Wildland Fire Hazard Mitigations Plans for Fremont County. The size of fuel breaks required and associated costs to construct these fuel breaks will vary, depending on hazardous fuels present, distance to transport construction equipment, and actual dimensions of fuel break.

Needs and Associated Costs – Tables of Fire District needs and associated costs (High Country RC &D Area, Inc., 2003).

Environmental Effect – Environmental effects (weed establishment, soil and surface water disturbance) resulting from fuel break construction and other land surface disturbances and the installation of dry hydrants.

Fire Prevention Programs – Public Education – Introduces Fremont County residents to the FIREWISE public education program, offers homeowners a checklist to avoid wildfire damage and, presents relevant public education web sites. The 2000 International Residential Fire Code, Uniform Building Code and International Building Code apply to Fremont County residents.

Red Zone Fire Program mitigation standard procedures should be implemented by the County and BLM to ensure the completion and long-term maintenance of fuel hazard reduction work on all new developments within the county. Fuel mitigation practices that would be involved include, but are not limited to: sagebrush thinning, fuel-breaks, and additional management measures around individual home-sites.

Subdivision review and building permit procedures should be sent to the responsible fire protection entities for review and comment. The Building Department, Zoning Administration, and the Fire Districts should meet to discuss the current system of building permit review, identify any problems that exist and implement solutions.

Table 18: Mitigation Summary for Island Park, North Fremont, and South Fremont Fire Districts.

Fremont County Commissioner Priority rating	Potential Problems/Risks	Responsible Agency/Recommended Mitigation
High	Transition from wideband to narrowband with communications equipment and operations has the potential to adversely affect firefighter safety and performance, specifically in the initial and extended action environment (NIFC, 2004).	Federal, State, Fire Districts • Firefighters and aerial resources must withdraw from fire operations activities if positive communication with their forces, supervisor, or adjoining forces is compromised. • Ensure local frequency management plans are in place and understood to support initial and extended action activities, and include contingencies for cooperator and aviation resources. • If communication problems become an issue, the fall back position is to revert to wideband mode. • Report problems with specific details through SAFENET or SAFECOM reporting systems.
High	Lack of National Fire Protection Association (NFPA) standards for new subdivisions	County, Fire Districts Adopt, as needed, portions of NFPA 1141 Standard for Fire Protection in Planned Building Groups (2003.) • Adopt, as needed, portions of NFPA 1143 Standard for Wildland Fire Management (2003). • Adopt, as needed, portions of NFPA 1144 Standard for Protection of Life and Property from Wildfire (2002). • Fire Districts should meet and discuss the current system of building permit review and identify problems that exist and implement solutions.
High	No RedZone program	Federal, Fire Districts, Homeowners • Conduct surveys identifying potential hazards a home may pose to firefighters during a wildland fire. • Conduct surveys identifying measures a home owner will take to reduce risks of their home igniting during a wildfire. • Conduct surveys identifying water sources, access concerns (bridges/road width), and utility location information needed by firefighters. • Mail surveys to homeowners for review. Include Firewise documents in the mailing to aid the homeowner in creating defensible space around the home.
High	Outdated Island Park Urban/Interface Evacuation Plan	Federal, Fire District, Homeowners • Update current evacuation plan.
High	Hazardous fuels on public land	Caribou-Targhee National Forest, County, Fire Districts • Hazardous fuels reduction project involving the area around Island Park. Commenced last year and is expected to continue through 2005. Activities include but are not limited to: 1) thinning of small diameter noncommercial size trees, 2) hand piling of thinned trees and other slash followed by burning, 3) public

		firewood gathering, 4) removal of fuels by private contractors, 5) commercial timber sales, and 6) prescribed burning where safe and at minimal risk to private property. • County and local fire cooperators will help the Forest Service identify other areas of concern and promote the need for doing this type of work. • Idaho Department of Lands will assess the state owned sections for opportunities to do fuel reduction projects on their lands. • County will require either a 30 or 50' "setback" for all new construction adjacent to public lands.
High	Excess debris created by the fuels reduction project	County • Request grant funding to purchase an industrial chipper or make arrangements to use the Forest Service chipper. • Provide chips to the general public and local entities for heating and power generating operations. • Identify areas where people can dump debris. • Offer free dump passes.
High	Inadequate fire fighting apparatus	County (upgrade or purchase new) • Personal Protective Equipment – Turnout Gear.
High	Inadequate communication system	County, State, Federal, Fire Districts • Require compatible communication system for all parties involved in fire protection.
High	Lack of GIS standards on fire district maps	County, Fire Districts • Develop color-coded standards for fire district maps showing water sources, grain elevators, gas depots, chemical and hazardous materials, sewer lagoons, and natural gas lines, to name a few.
High/Medium	Reduce human-caused fires	County, Fire Districts • Work with its federal cooperators to develop grass roots fire prevention efforts to reduce the occurrence of person caused fire ignitions through public education and participation in community events. • Develop partnerships with local businesses to promote fire prevention. Some examples are Sporting goods dealers will display materials relating to campfires and outdoor activities, Landscaping companies will display information relating to defensible space and fire resistant plants, Agriculture related businesses will display information related to agricultural burning, Off road vehicle dealers will display information related to fire prevention as it relates to OHV.
Medium	Inadequate fire fighting apparatus	County (upgrade or purchase new) • Two-medium or heavy engines to BLM specifications. • 4000 gallon tender. • CAFS units for two engines.
Medium	Hazardous fuels between improved property and defined boundary (WUI) and within improved property	County, Homeowners, State and Federal Agencies • Construct fuel breaks at designated locations (see map). • Maintain fuel breaks (periodic mowing,

		greenstripping, noxious and invasive weed removal). • Widen roads for better ingress and egress. • Public Education Programs.
Medium	Hazardous fuels on private land	County, Homeowners • Participate in educational programs funded by grants to reduce fuels by creating defensible space. • Enact NFPA 1144 Standards for Protection of Life and Property from Wildfire. • Host cleanup days and offer incentives for removal of hazardous fuels (chipping services, free dump days at the landfill). • Place evacuation plan map and map of readily available water sources for each subdivision within a lockable container and positioned at the entrance of subdivision. • Place safety flags on standpipes used for drafting at each water source. • Construct fuel breaks at designated locations (see map). • Maintain fuel breaks (periodic mowing, greenstripping, noxious and invasive weed removal. • Widen roads for better ingress and egress.
Medium	Inadequate access for Firefighting apparatus Vulnerable areas identified by North Fremont Fire District as high risk because of limited access only by brush and/or pumper truck	County, Fire Districts • Hire a full time Fire Marshall to inspect and enforce fire related codes. • Pass an ordinance that all new construction will meet county road standards. • Inspect bridges and post weight ratings. • Adopt a county wildland fire code-identifying road and construction standards. This should include provisions for requiring more than one access route into subdivisions. • Require that all roads be clearly marked with road name signs on metal poles. • Ensure adequate access in winter time months. • Provide turnarounds within each subdivision to accommodate the largest fire district apparatus.
Medium	Inadequate winter water supply and drafting locations	County, Fire Districts • Pursue grant opportunities to purchase additional water tenders. • Request grant funding to develop dry hydrant systems as delineated (see map). • Require storage tanks (cisterns) and/or hydrant systems in new subdivisions.
Medium	No regulation regarding burning permits	Federal, State DEQ, County, Fire Districts • Create county ordinance regarding burning. • Educate public. • Notify sheriff's office of controlled burns. • Coordinate with state and federal agencies using fire restrictions.
Low	Conservation Reserve Program (CRP) land (approximately 30,000 acres) with approximately 7,300	CRP members • Explore the need for educational pamplets distributed to each CRP member clarifying the program. • Conduct fuel treatment within older stands of grass

	acres designated as State Priority area or occupied habitat for sharptailed grouse	and shrubs to reduce hazardous fuels and to improve sharptailed grouse habitat. • Create fuel breaks around newly seeded acreage.
Low	Inadequate bridges and culverts	County, Fire Districts • Designate Fun Farm Road bridge inadequate for emergency vehicles over 5 ton GVW. • Designate alternate routes for emergency vehicles. • Provide turnarounds to accommodate the largest fire district apparatus.
Low	Open areas with no fire protection	County Fire Commissioners, State Tax Commission, Fire Districts • Create new fire protection district for open areas.
Low	No power pole protection	County • Install fireproof sleeves around power poles at designated locations. This will require cooperation and coordination with Utah Power and Electric and/or Rural Electric Association.
Low	Lack of water source at Fertilizer plants for fire suppression on adjacent lands	County, North and South Fire Districts • Install water tanks at fertilizer plants in readily accessible areas.

Figures 12, 13 and 14 show the WUI risk areas and the proposed fuel breaks for the Island Park, North Fremont and South Fremont Fire Districts respectively. These risk areas are considered to be the areas where 1) there is the greatest risk of loss due to wildland fire and 2) there is potential to mitigate the risk. Figure 13 also shows the high fire danger areas associated with Conservation Reserve Program lands within the fire district as determined by the North Fremont Fire District personnel interviewed for this plan.

Figure 12: WUI Risk Areas, Island Park Fire District.

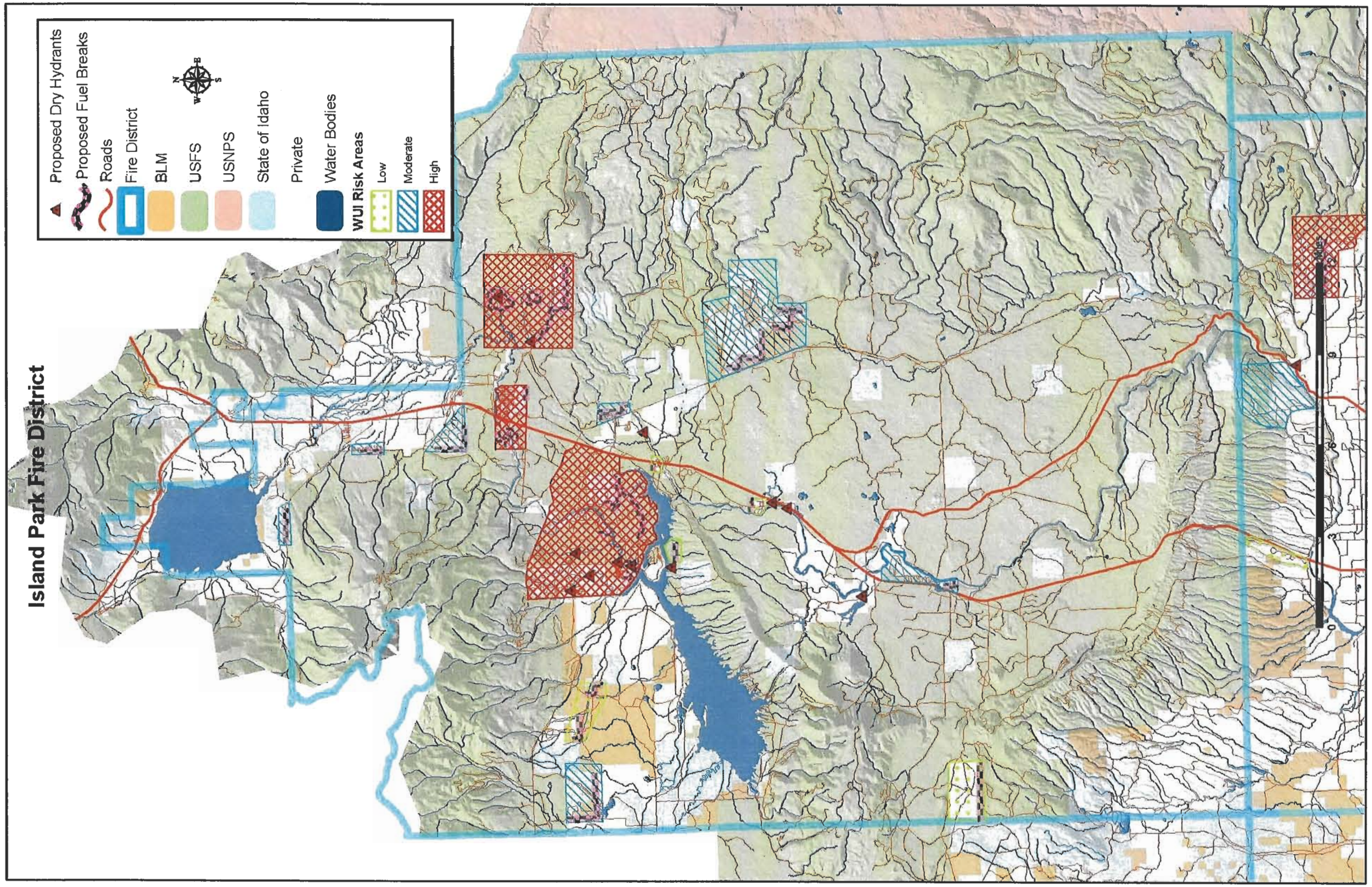


Figure 13: WUI Risk Areas, North Fremont Fire District.

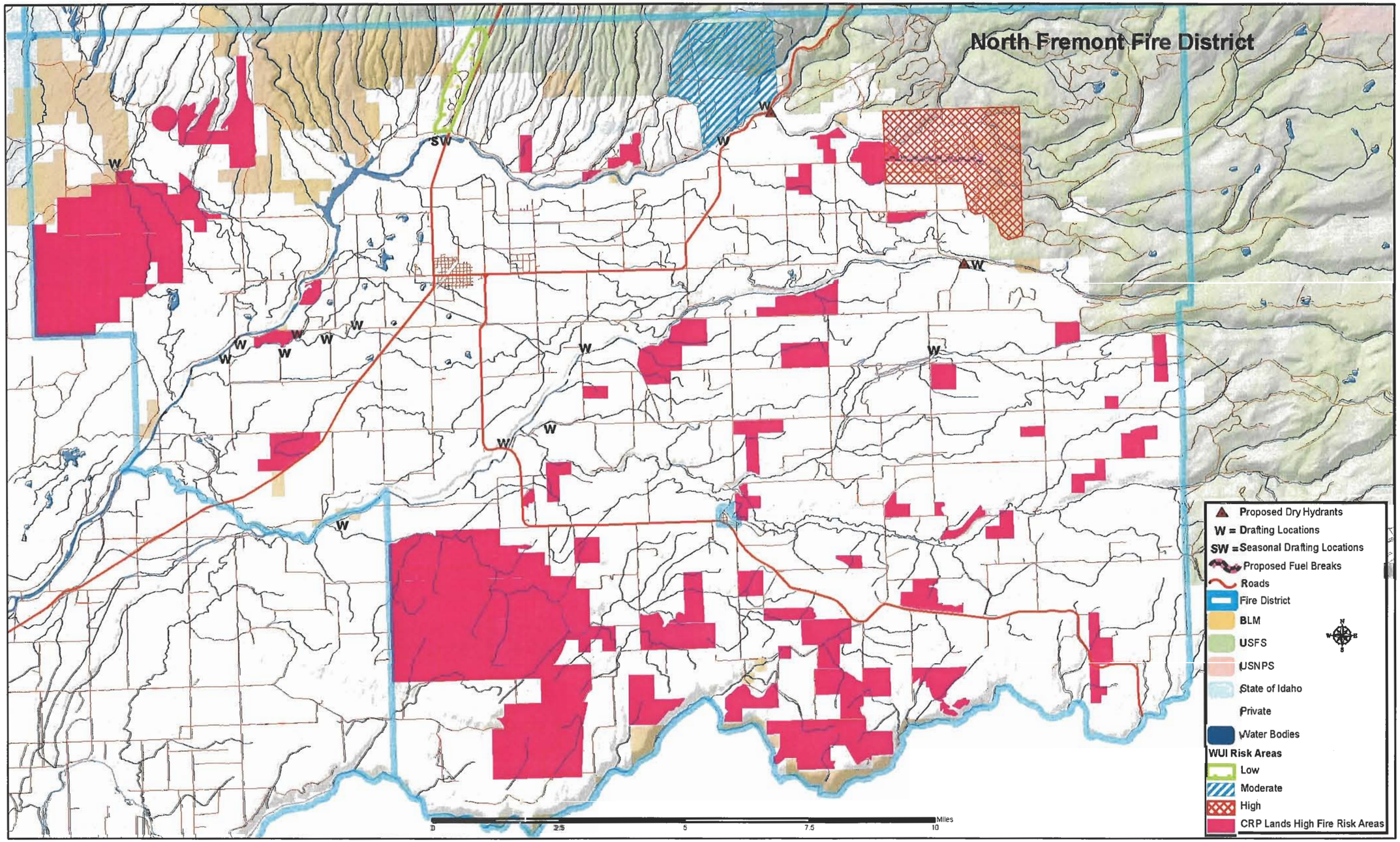
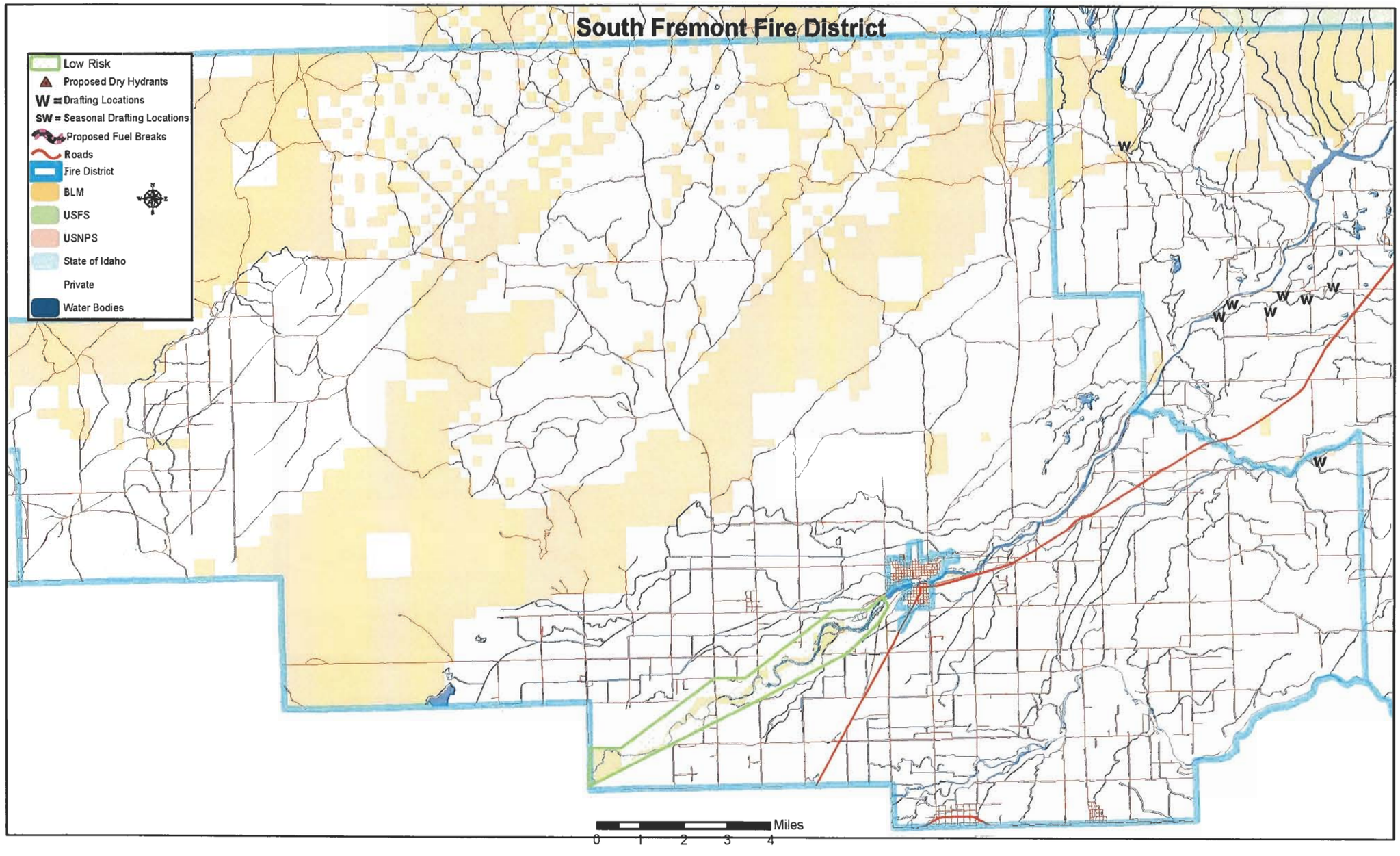


Figure 14: WUI Risk Areas, South Fremont Fire District



Henrys Lake

A Wildland-Urban Interface Communities-at-Risk Hazard and Mitigation Assessments for Henrys Lake area was completed earlier (North Wind, Inc., 2003) addressing 38 specific subdivisions and parcel clusters. The areas were assessed in late summer early fall 2003 during high wildland fire potential. Figure 12 compares two general areas within Henrys Lake over different seasons and years.

The mitigation assessment identified over 2,000 permitted lots within the 38 subdivisions. Of these, approximately 600 are developed. Nearly all the structures present were constructed of wood and, with only a few exceptions, had metal roofs. A-frame type structures that have shake roofs were reported to be in areas of heaviest fuels with no defensible space. Subdivision roads were maintained to some degree, however many were narrow with dead ends, no turnouts for large fire fighting apparatus or passing lanes for evacuation during suppression actions. There are ongoing efforts on the Caribou-Targhee Forest to implement fuels treatments on federal lands adjacent to subdivisions within the Henrys Lake and Island Park assessment areas.

Figure 15: Henry's Lake area in late Summer 2003 and Spring 2004.

Fuel Modification – Island Park

Twenty-six subdivisions representing 1,750 structures were assessed during June 2004. The majority of the subdivisions are in areas of heavy grass and sagebrush adjacent to moderate to dense conifer stands of various ages. Nearly all of the subdivisions in the Island Park area will benefit from firebreaks and fuel treatments. Some bridges (Figure 16) do not meet weight limits for fire fighting apparatus. Many subdivision roads are narrow (Figure 17), steep and not maintained (Figure 18), with no turnouts for large fire fighting apparatus or passing lanes for evacuation during suppression actions. Winter water availability for fighting structural fires is limited.

Private Land – Fuel Breaks

On private land, the simplest and least expensive method of controlling fuels involves creating fuel breaks along or adjacent to an existing road (Figure 1) and defensible space (Table 18 – Mitigation Summary; Environmental Effects; and, Table 35 – Homeowners checklist). The size of fuel breaks required and associated costs to construct these fuel breaks will vary, depending on hazardous fuels present, distance to transport construction equipment, and actual dimensions of fuel break. Fuel breaks usually require mowing of herbaceous cover or using a brush hog or similar implement to remove shrubs and small trees. Mowing grasses along or adjacent to roads and within the right-of-way should be planned in spring or early summer before the grass cures. Tree and brush removal can be done year-round although there is limited access to many areas during the winter.

Because of limited experience and limited finances at the County level, fuel breaks would be most effective if actions are undertaken in cooperation with State and Federal agencies. In addition, as much of the proposed fuel break would be on State or Federal lands the respective agencies will likely determine the method used for fuels reduction.

Public Land – Fuel Breaks

The Ashton/Island Park Ranger District of the Caribou-Targhee National Forest has implemented a hazardous fuels reduction project that is expected to continue through 2005. The project includes but is not limited to: 1) thinning of small diameter noncommercial size trees out 200 feet from the edge of a subdivision boundary, 2) hand piling of these trees and other slash followed by burning, 3) thinning an additional 300 feet with no slash piles, 3) public firewood gathering, 4) removal of fuels by private contractors, 5) commercial timber sales, and 6) prescribed burning where safe and at minimal risk to private property.

Dry Hydrant and Drafting Locations

There is a need to install dry hydrants and/or drafting areas for engines and tenders designated sites (Table 18, no. 8 – Mitigation summary, and Environmental Effects). For additional information see *Planning for Water Supply and Distribution in the Wildland/Urban Interface* (2004).

Upgrade Bridges and culverts

Bridges and culverts need to be upgraded to support the weight of the heaviest fire-fighting apparatus used within the fire district (Table 18 – Mitigation Summary).

Fire Extinguishers

Fire extinguishers (Figure 20) and portable pumps are provided at the North Fork Summer Home as well as individual fire extinguishers in every house and other outbuildings. This is a positive mitigation effort.

Defensible Space

Figures 21 and 22 show homes within Shotgun Village, that have no defensible space, exposed propane tanks and wooden roofs located in an old growth forest (see Table 18. Mitigation Summary, #2).

Figure 16: A Moose Creek bridge between Henderson Estates and Moose Creek SHA.

Figure 17: Narrow road in Elk Run Estates.

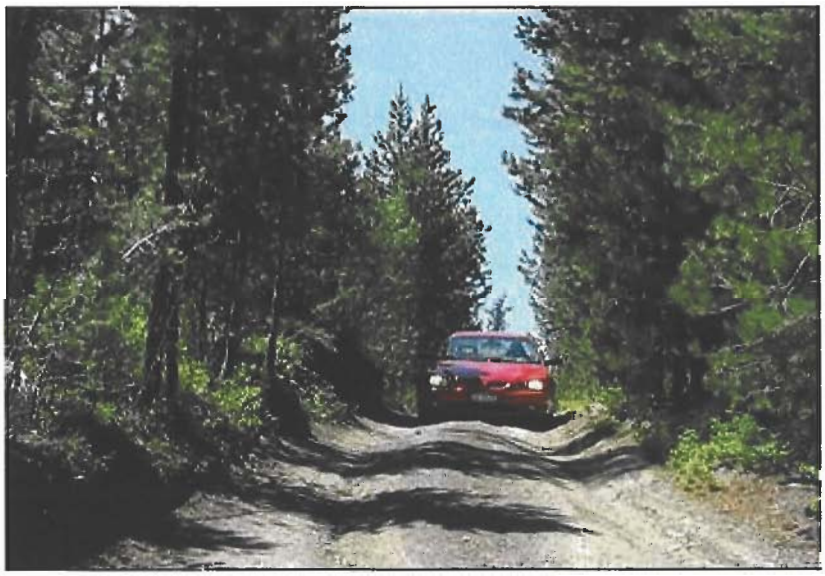


Figure 18: Steep and not maintained road within the Island Park Complex.

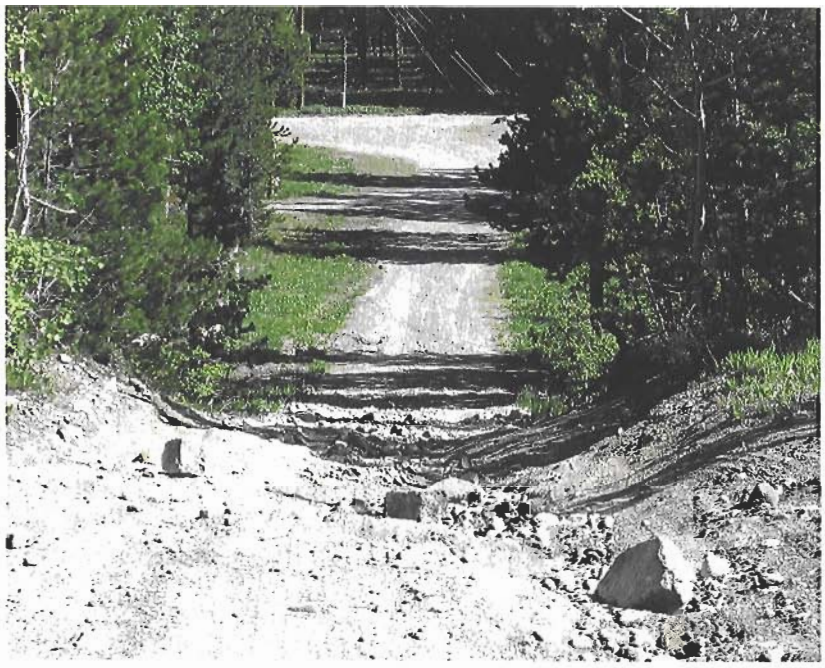


Figure 19: Suitable fuel break between improved property and WUI (south border of Silverhawk SD).

Figure 20: Fire extinquisher and hydrant near North Fork Clubhouse.

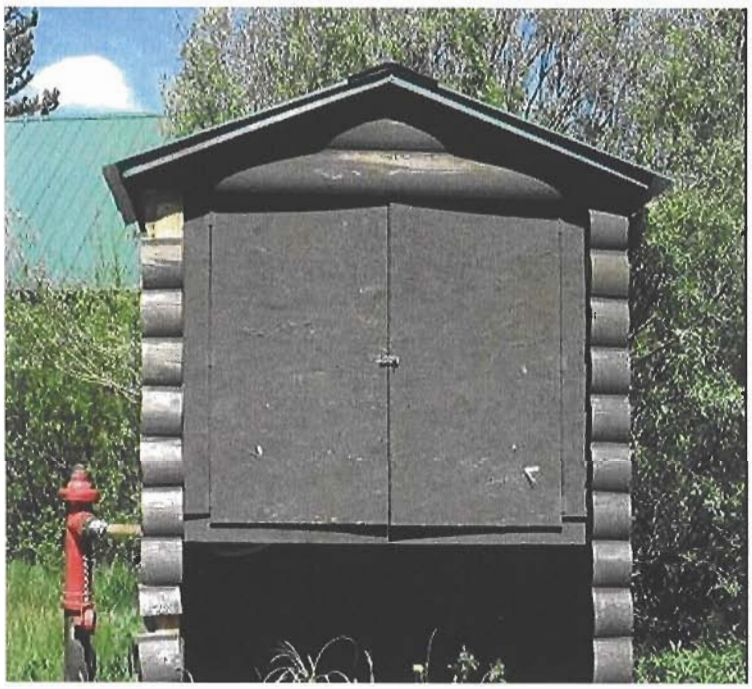


Figure 21: Shotgun Village home in old growth forest and no defensible space.

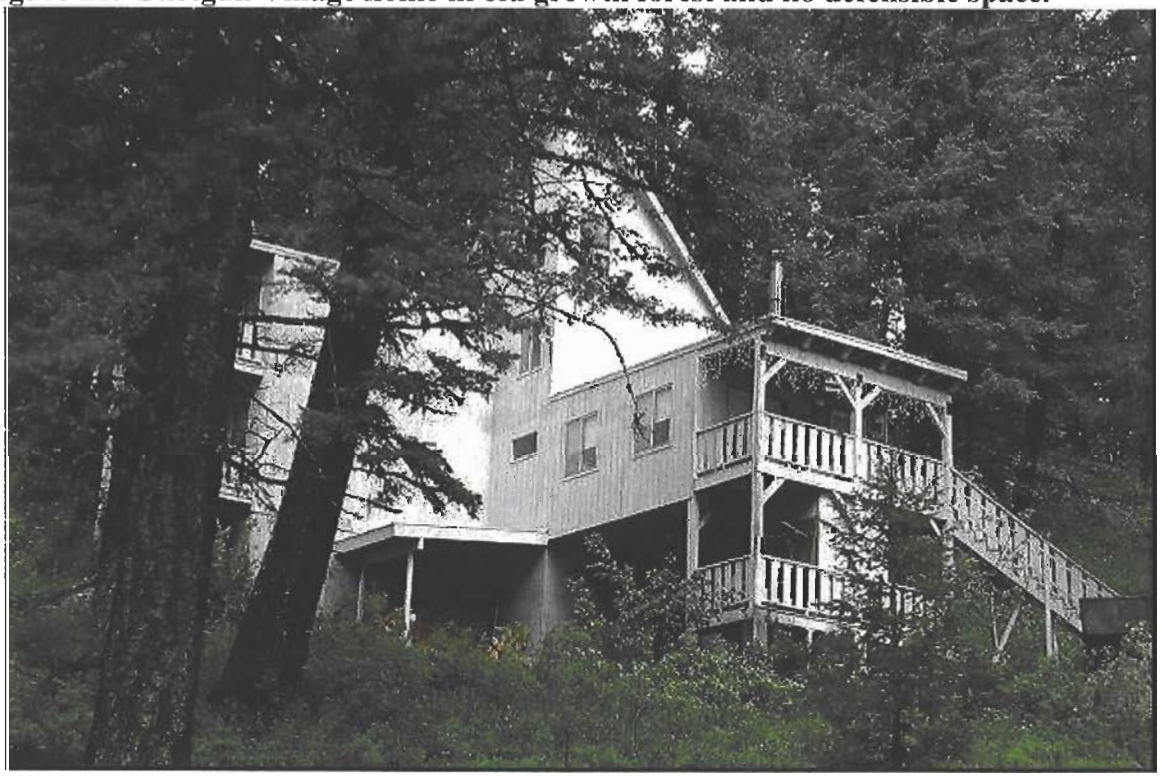


Figure 22: Shotgun Village showing A-frame home with wooden shingles, exposed propane tank and no defensible space.

Fuels Mitigation for Island Fire District

ISLAND PARK FIRE DISTRICT EXISTING NEEDS AND COSTS

Table 19: Island Park Fire District Existing Needs: Capital Expenses.

Needs	Costs
1,000 gallon replacement tank on pumper	$20,000
Wildland Light Rapid Attack pumper	$250,000
Rescue/Extradition Truck	$200,000
SCBA (10 each @$5,000 each)	$50,000

Table 20: Island Park Fire District Existing Needs: Training and Certification.

Needs	Costs
Projector and screen for Power Point Presentations	$2,500
Power Point Software	$500

Table 21: Island Park Fire District Existing Needs: Communication.

Needs	Costs
Upgrade Hand-held Radios (25 radios @ $900 each)	$22,500

Table 22: Island Park Fire District Existing Needs: Prevention and Inspection.

Needs	Costs
Prevention hand out materials	$1,500

Table 23: Island Park Fire District Existing Needs: Public Education.

Needs	Costs
FireWise Program	$10,000
Fire Danger Rating Signs along Highways at: • Reynolds Pass • Targhee Pass • Ashton Hill	$7,500

Fuels Mitigation for North Fremont Fire District

Private Land – Fuel Breaks

There is a need to create a fuel break adjacent to the Potpourii Subdivision (Figure 2) as well as defensible space within this subdivision. (Table 18 – Mitigation summary, Environmental Effects, and Table 35 – Homeowners checklist).

Conservation Reserve Program (CRP)

There is an estimated 30,000 acres of CRP land within this fire district with an estimated 7,300 of these acres designated as State Priority area or occupied habitat for sharptailed grouse (personal communication, Dennis Aslett, IDFG, 2004). Fuel treatments are recommended for the State Priority area and are identified in Table 18 – Mitigation Summary, no. 3.

Dry Hydrant and Drafting Locations

Dry hydrant locations and seasonal/permanent drafting areas are shown in n Figure 2 and Table 17, no. 8 – Mitigation summary, and Environmental Effects. For additional information see *Planning for Water Supply and Distribution in the Wildland/Urban Interface* (2004).

Figure 23: Narrow road in Potpourri SD with no turn outs for fire fighting apparatus.

Figure 24: Road with potential for fuel break on south boundary of Potpourri subdivision.

Figure 25: Home in Potpourri Subdivision showing no defensible space.

NORTH FREMONT FIRE DISTRICT EXISTING NEEDS AND COSTS

Table 24: North Fremont Fire District Existing Needs: Capital Expenses.

Needs	Costs
Tender Truck	$200,000
Light or Rapid Attack Pumper	$250,000

Table 25: North Fremont Fire District Existing Needs: Training and Certification.

Needs	Costs
Videos, Computer-based Training Modules	$5,000
New Editions of IFSTA Training Materials, Manuals and Workbooks, Videos ($40 each). Need 24.	$960
Improved Training Resources: Department computer and Projection System for Power Point Presentations	$7,000
Complete and Review Current S.O.G.s	$2,000

Table 26: North Fremont Fire District Existing Needs: Communication.

Needs	Costs
Update Hand-held Radios	$900 each

Table 27: North Fremont Fire District Existing Needs: Prevention and Inspection.

Needs	Costs
Fire Code Enforcement Training	$2,000
Grants for Training	$2,000
Materials for Training and Enforcement	$5,000
County Adoption of Codes	

Table 28: North Fremont Fire District Existing Needs: Public Education.

Needs	Costs
Large Media Program for Local Areas on Safety and Prevention before the Fire Season Commences (FireWise Program).	$50,000

Fuels Mitigation for South Fremont Fire District

There are no hazardous fuels between improved property and defined boundary (Wildland-Urban Interface). The Henrys Fork and associated canals provide natural fuel breaks for most subdivisions. In addition, productive agriculture lands buffer subdivisions in this fire district. In some cases, weed infested, stubble and fallow fields occur near subdivisions presenting the greatest fuel hazard to structures.

It is recommended that homeowners remove fuels between the edge of roads and fence lines parallel to their subdivisions and implement additional mitigation shown in Table 18 – Mitigation Summary, no. 2.

SOUTH FREMONT FIRE DISTRICT EXISTING NEEDS AND COSTS

Table 29: South Fremont Fire District Existing Needs: Capital Expenses.

Needs	Costs
None identified.	

Table 30: South Fremont Fire District Existing Needs: Training and Certification.

Needs	Costs
Videos and Computer-based Training Modules	$7,500
Current IFSTA Student Manuals and Workbooks ($40.00 each, 25 needed)	$1,000
Certified Local Courses	
Subsidized Training	

Table 31: South Fremont Fire District Existing Needs: Communication.

Needs	Costs
New Repeater	$5,500
Upgrade Radios to Current System ($900.00 each, 25 needed)	$22,500

Table 32: South Fremont Fire District Existing Needs: Prevention and Inspection.

Needs	Costs
Fire Code Regulation Enforcement Capacity	
Fire Cause and Origin Investigations	

Table 33: South Fremont Fire District Existing Needs: Public Education.

Needs	Costs
Complete FIREWISE Program	$50,000
Prepackaged Presentations	
Grants for Handout Materials	
Training on Public Speaking for District Members	